Claims:

What is claimed is

1) A method for providing call redirect functionality for a packet based voice system, the system having at least a gateway connected to a PBX, the gateway connected to a data network, the PBX connected to a PSTN; the method comprising the steps of:

a) disconnecting the PBX from the PSTN;

b) connecting the gateway to the PSTN;

c) programming the gateway to receive and determine a desired route for transmission of all incoming and outgoing calls, said incoming and outgoing calls including but not limited to all incoming calls from the PSTN, all incoming calls from the data network; and all outgoing calls from the PBX; and

d) programming the gateway to transmit said incoming and outgoing calls over said desired route if said desired route is over the PSTN or over the PBX; and

e) programming the gateway to detect if said desired route is available for transmitting said incoming and outgoing call if said desired route is over the data network; programming the gateway to transmit said call over said desired route over the data network if said desired route is available, and programming the gateway to redirect transmission of said call over the PSTN if said desired route is not available.

2) A method for providing redirect functionality to a packet based voice system as in claim 1, wherein the method further comprises the step of receiving a call and querying said call for a termination number, and wherein said steps of programming

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the gateway to transmit said call over said desired route further comprise truncating

said termination number for transmission over said desired route if said call is

received over the data network and is for routing over the PSTN.

3) A method for providing redirect functionality for a packet based voice system as in

claim 1, wherein said step of programming the gateway to receive and determine a

desired route for all incoming and outgoing calls comprises:

    a) programming the gateway to execute a dial plan; said dial plan comprising steps

       of:

      i) receiving a call; querying said call for a termination number;

      ii) determining a desired route for said call by:

         (1) using said termination number to determine if said call should be routed to

            the PSTN, PBX, or data network.

      iii) determining a desired route for terminating said call.

4) A method for providing redirect functionality for a packet based voice system as in

claim 3, wherein said dial plan comprises the steps of:

    a) receiving a call; querying said call for a termination number; and

    b) using said termination number to determine if said call is:

      i) an intra-company inbound call coming over the data network wherein a

         desired route is determined to be over the PBX;

      ii) an inbound leaking call coming over the data network wherein a desired route

         is determined to be over the PSTN;

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iii) an outbound leaking call coming from the PBX wherein a desired route is determined to be over the data network;

iv) an outbound call coming from the PBX wherein a desired route is determined to be over the PSTN.

5) A method for providing redirect functionality for a packet based voice system as in claim 3, wherein the enterprise has a country code, has a three digit area code, and has an at least a three digit switch code; and wherein said dial plan comprises the steps of:

   a) developing a national enterprise list, said national enterprise list comprising at least an enterprise number; each of said at least an enterprise number having a three digit area code and an at least three digit switch code;

   b) receiving a call; querying said call for a termination number; said termination number comprising a string of numerical digits; and

   c) categorizing said call as an:

      i) inbound national long distance call from the data network wherein a desired route is over the PBX if said termination number begins with a one and is followed by three digits that match the enterprise three digit area code followed by at least three digits that match the enterprise at least three digit switch code;

      ii) outbound national long distance enterprise call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by a three digit area code and an at least three digit

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switch code that match a three digit area code and an at least three digit switch code from one of said enterprise numbers from said national enterprise list;

iii) inbound call from the PSTN wherein a desired route is over the PBX if said termination number has fewer than seven digits.

6) A method for providing redirect functionality for a packet based voice system as in claim 5; wherein said dial plan further comprises the steps of:

a) developing a national leak list; said national leak list comprising a list of at least a national leak number having an at least a three digit area code; and

b) categorizing said call as an:

i) outbound national leaking call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by three digits that match said at least three digit area code from one of said national leak numbers on said national leak list;

ii) inbound national leaking call from the data network wherein a desired route is over the PSTN if said termination number begins with a one followed by three digits that match the enterprise area code followed by at least three digits that do not match the enterprise at least three digit switch number;

iii) outbound national long distance call from the PBX wherein a desired route is over the PSTN if said termination number begins with a one and is not categorized as a said inbound national leaking call, a said outbound national leaking call, a said inbound national long distance call, or a said outbound national long distance enterprise call.

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7) A method for providing redirect functionality for a packet based voice system as in claim 5, wherein the dial plan further comprises the steps of:

a) developing an international outbound enterprise list, said international outbound enterprise list comprising a list of at least an international outbound enterprise number having a country code, followed by a foreign area code, followed by a foreign switch code;

b) developing an international inbound list; said international inbound list having at least an inbound international number, said inbound international number comprising an at least two digit international direct dial access code; and

c) categorizing said call as an:

i) outbound international enterprise call wherein a desired route is over the data network if the first three digits of said termination number are 011 and are followed by a country code, a foreign area code, and a foreign switch code that match a country code, a foreign area code, and a foreign switch code from one of said at least an enterprise numbers from said international outbound enterprise list;

ii) international inbound enterprise call from the data network wherein a desired route is over the PBX if said termination number has more than ten digits and an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list, and is followed by a country code, a three digit area code, and an at least three digit switch code that match

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the enterprise country code, three digit area code, and at least three digit switch code from the enterprise.

8) A method for providing redirect functionality for a packet based voice system as in claim 7, wherein said dial plan further comprises the steps of:

a) developing an international outbound national leak list, said international outbound national leak list comprising a list having at least an international outbound leak number, each of said at least an international outbound leak numbers having a country code, followed by an area code; and

b) categorizing said call as an

   i) outbound international national leak call wherein a desired route is over the data network if said termination number has three first digits of 011 followed by a country code and an area code that match a country code and area code from one of said at least a foreign leak number on said foreign leak list;

   ii) outbound international call wherein a desired route is over the PSTN if said termination number has three first digits of 011 and said call is not classified as a said outgoing international enterprise call or a said outgoing international leak call;

   iii) inbound international local leaking call from the data network for routing over the PSTN if said terminating number has more than ten digits and said terminating number has an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list, followed

by a country code and an area code that matches the enterprise country code and area code, followed by an at least three digit switch code that does not match the enterprise at least three digit switch code;

iv) inbound international long distance leaking call from the data network wherein a desired route is over the PSTN if said terminating number has an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list, followed by a country code that matches the enterprise country code, followed by a three digit area code that does not match the enterprise three digit area code.

9) A method for providing redirect functionality for a packet based voice system as in claim 8, wherein said dial plan further comprises the steps of categorizing said call as an:

a) inbound international for international leaking call from the data network wherein a desired route is over the PSTN if said terminating number has an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list, followed by a country code that does not match the enterprise country code.

10) A method for providing redirect functionality for a packet based voice system as in claim 3, wherein the system is for use by an enterprise having a country code, having

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a three digit area code, and having an at least a three digit switch code; and wherein said dial plan comprises the steps of:

a) developing a special list; said special list comprising at least a special number;

b) developing a national enterprise list, said national enterprise list comprising at least an enterprise number; each of said at least an enterprise number having a three digit area code and an at least three digit switch code;

c) receiving a call; querying said call for a termination number; said termination number comprising a string of numerical digits;

d) categorizing said call as an:

   i) inbound national long distance call from the data network wherein a desired route is over the PBX if said termination number begins with a one and is followed by three digits that match the enterprise three digit area code followed by at least three digits that match the enterprise at least three digit switch code;

   ii) outbound national long distance enterprise call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by a three digit area code and an at least three digit switch code that match a three digit area code and an at least three digit switch code from one of said enterprise numbers from said national enterprise list;

   iii) outbound local call from the PBX wherein a desired route is over the PSTN if said termination number matches any of said at least a special number on said special list;

iv) inbound call from the PSTN wherein a desired route is over the PBX if said termination number has fewer than seven digits.

11) A method for providing call redirect functionality for a packet based voice system, the system having at least a PBX connected to a gateway and connected to the PSTN, the gateway connected to a data network, comprising the steps of:

a) disconnecting the PBX from the PSTN;

b) connecting the gateway to the PSTN;

c) programming the computer to execute a dial plan; said dial plan comprising steps of:

i) receiving a call; querying said call for a termination number;

ii) using said termination number to determine if said call is:

(1) an intra-company call from over the data network wherein a desired route is over the PBX;

(2) a leaking call from over the data network wherein a desired route is over the PSTN;

(3) a leaking call from the PBX wherein a desired route is over the data network;

(4) an outgoing call from the PBX wherein a desired route is over the PSTN;

d) programming the gateway to transmit said call over said desired route if said desired route is over the PSTN or over the PBX;

e) programming the gateway to test said desired route if said desired route is over the data network to detect if said desired route is unavailable for transmitting said

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call, programming the gateway to transmit said call over said desired route if said

desired route is available; and programming the gateway to redirect transmission

of said call over the PSTN if said desired route is unavailable.

5   12) A method for providing call redirect functionality for a packet based voice system for

an enterprise, the voice network having at least a PBX connected to a gateway and

connected to the PSTN, the gateway connected to a data network, the enterprise

having a three digit area code, an at least three digit switch code, comprising the steps

of:

10 a) disconnecting the PBX from the PSTN;

b) connecting the gateway to the PSTN;

c) developing a national enterprise list, said national enterprise list having at least an

enterprise number; each of said at least an enterprise number having a three digit

area code and an at least three digit switch code;

15 d) developing a national leak list, said national leak list having a list of at least one

national leak number comprising an at least a three digit area code; and

e) developing an international outbound enterprise list, said international outbound

enterprise list comprising a list having at least an international outbound

enterprise number, said international outbound number having an at least two

20 digit country code, followed by an area code, followed by a switch code;

f) developing an international outbound leak list; said international outbound leak

list comprising a list having at least an international outbound leak number having

an at least two digit country code, and an area code;

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g) developing an international inbound list, said international inbound list having at least an inbound international number, said inbound international number comprising an at least two digit international direct dial access code;

h) developing a special list; said special list comprising at least a special number;

i) programming the gateway to execute a dial plan; said dial plan comprising steps of:

   i) receiving a call, querying said call for a termination number; said termination number comprising at least an extension number;

   ii) using said termination number to categorize said call as an:

      (1) inbound national long distance call from the data network wherein a desired route is over the PBX if said termination number begins with a one and is followed by three digits that match the enterprise three digit area code followed by at least three digits that match the enterprise at least three digit switch code;

      (2) outbound national long distance enterprise call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by a three digit area code and an at least three digit switch code that match a three digit area code and an at least three digit switch code from one of said at least an enterprise number from said national enterprise list;

      (3) special call from the PBX wherein a desired route is over the PSTN if said termination number is less than seven digits and matches one of said at least a special number from said special list;

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(4) inbound call from the PSTN wherein a desired route is over the PBX if said termination number has fewer than seven digits and is not categorized as a said special call;

(5) outbound national leaking call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by three digits that match said at least three digit area code from one of said at least a national leak numbers from said national leak list;

(6) inbound national leaking call from the data network wherein a desired route is over the PSTN if said termination number begins with a one followed by three digits that match the enterprise area code followed by at least three digits that do not match the enterprise at least three digit switch number; and

(7) outbound national long distance call from the PBX wherein a desired route is over the PSTN if said termination number begins with a one and is not categorized as a said inbound national leaking call, a said outbound national leaking call, a said inbound national long distance call, or a said outbound national long distance enterprise call;

(8) outbound international enterprise call from the PBX wherein a desired route is over the data network if the first three digits of said termination number are 011 and are followed by an at least two digit country code, an area code, and a switch code that match said at least two digit country code, said area code, and said switch code from one of said enterprise numbers from said international outbound enterprise list;

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(9) outbound international leak call from the PBX wherein a desired route is

over the data network if said termination number has three first digits of

011 followed by a country code and an area code that match said country

code and said area code from one of said at least a foreign leak numbers

on said foreign leak list;

(10) outbound international call from the PBX wherein a desired route is over

the PSTN if said termination number has three first digits of 011 and said

call is not classified as a said outgoing international enterprise call or a said

outgoing international leak call;

(11) inbound international call from the data network wherein a desired route is

over the PBX if said terminating number has more than ten digits and has

an at least two digit prefix that matches said at least two digit international

direct dial access code from one of said at least an inbound international

number from said international inbound list followed by a country code, a

three digit area code, and an at least three digit switch code that match the

country code, three digit area code, and at least three digit switch code of

the enterprise;

(12) inbound international local leaking call from the data network wherein a

desired route is over the PSTN if said terminating number has more than

ten digits beginning with an at least two digit prefix that matches said at

least two digit international direct dial access code from one of said at

least one inbound international number from said international inbound

list, followed by a country code and an area code that match the enterprise

country code and area code, and said terminating number having an at least three digit switch code following the three digit area code that does not match the enterprise at least three digit switch code;

(13) incoming international long distance leaking call from the data network wherein a desired route is over the PSTN if said terminating number has more than ten digits beginning with an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least an inbound international numbers from said inbound international list, followed by a country code that matches the enterprise country code, followed by a three digit area code that does not match the enterprise area code;

j) programming the gateway to truncate said termination number to:

i) said extension number if said call is categorized as a said inbound national long distance call or a said inbound international call;

ii) an at least three digit switch code and said at least an extension code if said call is categorized as a said inbound national leaking call or a said international inbound local leaking call;

iii) said at least three digit area code, said at least three digit switch code, and said extension number if said call is categorized as a said inbound international long distance leaking call;

k) programming the gateway to transmit said call over said desired route if said desired route is over the PSTN or over the PBX;

l) programming the gateway to test said desired route if said desired route is over

the data network to detect if said desired route is unavailable for transmitting said

call, programming the gateway to transmit said call over said desired route if said

desired route is available; and programming the gateway to redirect transmission

of said call over the PSTN if said desired route is unavailable.

13) A dial plan for use with a gateway in a packet based voice system, the gateway

connected to a PBX serving an enterprise, the gateway connected to a data network,

the gateway connected to a PSTN, the dial plan comprising the steps of:

a) programming the gateway to perform the steps of:

i)   receiving a call; querying said call for a termination number;

ii) using said termination number to determine if said call should be routed over

the PSTN, PBX, or data network;

iii) programming the gateway to determine a desired route over one of the PBX,

PSTN, or data network for transmitting said call; and

iv) programming the gateway to determine the availability of said desired route if

said desired route is over the data network; and programming the gateway to

determine a re-direct route for said call over the PSTN if said desired route

over the data network is not available.

14) A dial plan as in claim 13, further comprising the steps of:

a) using said termination number to determine if said call is:

i)   an intra-company call from the data network wherein a desired route is over

the PBX;

ii) a leaking call from the data network wherein a desired route is over the PSTN;

iii) a leaking call from the PBX wherein a desired route is over the data network;

or

iv) an outgoing call from the PBX wherein a desired route is over the PSTN.

15) A dial plan as in claim 13, wherein the enterprise has a country code, has a three digit

area code, and has an at least a three digit switch code; and wherein said dial plan

further comprises:

a)   a national enterprise list, said national enterprise list comprising at least an

enterprise number; each of said at least an enterprise number having a three digit

area code and an at least three digit switch code; and

b)   categorizing said call as an:

i)   inbound national long distance call from the data network wherein a desired

route is over the PBX if said termination number begins with a one, is

followed by three digits that match the enterprise three digit area code, and is

followed by at least three digits that match the enterprise at least three digit

switch code;

ii) outbound national long distance enterprise call from the PBX wherein a

desired route is over the network if said termination number begins with a one

and is followed by a three digit area code and an at least three digit switch

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code that match a three digit area code and an at least three digit switch code from one of said enterprise numbers from said national enterprise list;

iii) inbound call from the PSTN wherein a desired route is over the PBX if said termination number has fewer than seven digits.

16) A dial plan as in claim 15; wherein said dial plan further comprises:

a) a national leak list, said national leak list comprising a list of at least a national leak number, said national leak number comprising at least a three digit area code; and

b) categorizing said call as an:

i) outbound national leaking call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by three digits that match said at least three digit area code from one of said national leak numbers on said national leak list;

ii) inbound national leaking call from the data network wherein a desired route is over the PSTN if said termination number begins with a one followed by three digits that match the enterprise area code followed by at least three digits that do not match the enterprise at least three digit switch number;

iii) outbound national long distance call from the PBX wherein a desired route is over the PSTN if said termination number begins with a one and is not categorized as a said inbound national leaking call, a said outbound national leaking call, a said inbound national long distance call, or a said outbound national long distance enterprise call.

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17) A dial plan as in claim 15, wherein the dial plan further comprises:

a) an international outbound enterprise list, said international outbound enterprise list comprising a list of at least one international outbound enterprise number, said at least one international outbound enterprise number comprising a country code, followed by a foreign area code, followed by a foreign switch code;

b) an international inbound list, said international inbound list having at least an inbound international number, said inbound international number comprising an at least two digit international direct dial access code; and

c) categorizing said call as an:

   i) outbound international enterprise call from the PBX wherein a desired route is over the data network if the first three digits of said termination number are 011 and are followed by a country code, a foreign area code, and a foreign switch code that match said country code, said foreign area code, and said foreign switch code from one of said at least one enterprise number from said international outbound enterprise list;

   ii) international inbound call from the data network wherein a desired route is over the PBX if said termination number has an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list.

18) A dial plan as in claim 17, wherein said dial plan further comprises:

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a) an international leak list, said international leak list comprising a list of international leak numbers, each of said international leak numbers having a country code, followed by a foreign area code; and

b) categorizing said call as an

   i) outgoing international leak call from the PBX wherein a desired route is over the data network if said termination number has three first digits of 011 followed by a country code and a foreign area code that match said country code and said foreign area code from one of said foreign leak numbers on said foreign leak list;

   ii) outgoing international call from the PBX wherein a desired route is over the PSTN if said termination number has three first digits of 011 and said call is not classified as a said outgoing international enterprise call or a said outgoing international leak call;

   iii) incoming international enterprise call from the data network wherein a desired route is over the PBX if said terminating number has an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list, followed by a country code, three digit area code, and at least three digit switch code that match the enterprise country code, three digit area code, and at least three digit switch code;

   iv) incoming international local leaking call from the data network wherein a desired route is over the PSTN if said terminating number has an at least two digit prefix that matches said at least two digit international direct dial access

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code from one of said at least one inbound international number from said international inbound list followed by a country code and a three digit area code that match the enterprise country code and three digit area code, followed by an at least three digit switch code that does not match the enterprise at least three digit switch code;

v) incoming international long distance leaking call from the data wherein a desired route is over the PSTN if said terminating number has an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list followed by a country code that matches the enterprise country code followed by a three digit area code that does not match the enterprise three digit area code.

19) A dial plan as in claim 18, wherein said dial plan further comprises categorizing said call as an:

i) incoming international for international leaking call from the data network wherein a desired route is over the PSTN if said terminating number has an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list followed by a country code that does not match the enterprise country code.

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20) A dial plan as in claim 13, wherein the enterprise has a country code, a three digit

area code, and an at least a three digit switch code; and wherein said dial plan

comprises:

a) a special list; said special list comprising at least a number;.

b) a national enterprise list, said national enterprise list comprising at least an

enterprise number; each of said at least an enterprise number having a three digit

area code and an at least three digit switch code;

c) receiving a call; querying said call for a termination number; said termination

number comprising a string of numerical digits; and

d) categorizing said call as an:

i) inbound national long distance call from the network wherein a desired route

is over the PBX if said termination number begins with a one and is followed

by three digits that match the enterprise three digit area code followed by at

least three digits that match the enterprise at least three digit switch code;

ii) outbound national long distance enterprise call from the PBX wherein a

desired route is over the data network if said termination number begins with

a one and is followed by a three digit area code and an at least three digit

switch code that match a three digit area code and an at least three digit switch

code from one of said enterprise numbers from said national enterprise list;

iii) an outbound local call from the PBX wherein a desired route is over the

PSTN if said termination number matches any of said at least one number on

said special list;

iv) inbound call from the PSTN wherein a desired route is over the PBX if said

termination number has fewer than seven digits and is not a said special call.

21) A dial plan for a packet based voice system, the system having at least a gateway

5   connected to a PBX at an enterprise, the gateway also connected to a PSTN, the

gateway also connected to a data network; the dial plan comprising the steps of:

i)   receiving a call; querying said call for a termination number;

ii) using said termination number to determine if said call is:

(1) an intra-company call from over the data network wherein a desired route

is over the PBX;

(2) a leaking call from the data network wherein a desired route is over the

PSTN;

(3) a leaking call coming from the PBX wherein a desired route is over the

data network;

15   (4) an outbound call from the PBX wherein a desired route is over the PSTN;

b)   programming the gateway to test said desired route if said desired route is over

the data network to detect if said desired route is unavailable for transmitting said

call, programming the gateway to determine a desired re-direct route over the

PSTN if said desired route is not available.

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22) An article for executing a dial plan for a packet based voice system, the system

having at least a gateway connected to a PBX at an enterprise, the gateway also

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connected to a PSTN, the gateway also connected to a data network; the article comprising:

a) a computer readable storage medium;

b) means recorded on said medium for receiving a call;

c) means recorded on said medium for querying said call for a termination number;

d) means recorded on said medium for using said termination number to determine if said call is:

(1) an intra-company call from over the data network wherein a desired route is over the PBX;

(2) a leaking call from the data network wherein a desired route is over the PSTN;

(3) a leaking call coming from the PBX wherein a desired route is over the data network;

(4) an outbound call from the PBX wherein a desired route is over the PSTN; and

e) means recorded on said medium for testing said desired route if said first desired route is over the data network to detect if said first desired route is unavailable for transmitting said call means recorded on said medium for determining a desired re-direct route over the PSTN if said desired route is not available.

23) A dial plan for a gateway in a packet based voice system, the gateway connected to a PBX at an enterprise, the gateway connected to a data network, the gateway

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connected to a PSTN; the enterprise having a three digit area code, an at least three

digit switch code; the dial plan comprising:

a) a national enterprise list, said national enterprise list having at least an enterprise

    number; each of said at least an enterprise number having a three digit area code

    and an at least three digit switch code;

b) a national leak list, said national leak list having a list of at least one national leak

    number comprising at least a three digit area code;

c) an international outbound enterprise list, said international outbound enterprise

    list comprising a list having at least an international outbound enterprise number,

    said international outbound number having an at least two digit country code,

    followed by a foreign area code, followed by a foreign switch code;

d) an international inbound list, said international inbound list having at least an

    inbound international number, said inbound international number comprising an

    at least two digit international direct dial access code;

e) a special list; said special list comprising at least a number; and

f) programming the gateway to perform the steps of:

    i) receiving a call; querying said call for a termination number; said termination

        number comprising at least an extension number;

    ii) using said termination number to categorize said call as an:

        (1) inbound national long distance call from the data network wherein a

            desired route is over the PBX if said termination number begins with a one

            and is followed by three digits that match the enterprise three digit area

code followed by at least three digits that match the enterprise at least three digit switch code;

(2) outbound national long distance enterprise call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by a three digit area code and an at least three digit switch code that match a three digit area code and an at least three digit switch code from one of said at least an enterprise number from said national enterprise list;

(3) special call from the PBX wherein a desired route is over the PSTN if said termination number is less than seven digits and matches one of said at least a special number from said special list;

(4) inbound call from the PSTN wherein a desired route is over the PBX if said termination number has fewer than seven digits and is not categorized as a said special call;

(5) outbound national leaking call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by three digits that match said at least three digit area code from one of said at least a national leak numbers from said national leak list;

(6) inbound national leaking call from the data network wherein a desired route is over the PSTN if said termination number begins with a one followed by three digits that match the enterprise area code followed by at least three digits that do not match the enterprise at least three digit switch number;

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(7) outbound national long distance call from the PBX wherein a desired route is over the PSTN if said termination number begins with a one and is not categorized as a said inbound national leaking call, a said outbound national leaking call, a said inbound national long distance call, or a said outbound national long distance enterprise call.

(8) outbound international enterprise call from the PBX wherein a desired route is over the data network if the first three digits of said termination number are 011 and are followed by an at least two digit country code, a foreign area code, and a foreign switch code that match said at least two digit country code, said foreign area code, and said foreign switch code from one of said enterprise numbers from said international outbound enterprise list;

(9) outbound international leak call from the PBX wherein a desired route is over the data network if said termination number has three first digits of 011 followed by a country code and a foreign area code that match said country code and said foreign area code from one of said at least a foreign leak numbers on said foreign leak list;

(10) outbound international call from the PBX wherein a desired route is over the PSTN if said termination number has three first digits of 011 and said call is not classified as a said outgoing international enterprise call or a said outgoing international leak call;

(11) inbound international call from the data network wherein a desired route is over the PBX if said terminating number has more than 10 digits and has

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an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least an inbound international number from said international inbound list followed by a country code, a three digit area code, and an at least three digit switch code that match the country code, three digit area code, and at least three digit switch code of the enterprise;

(12) inbound international local leaking call from the data network wherein a desired route is over the PSTN if said terminating number has more than ten digits beginning with an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list, followed by a country code and an area code that match the enterprise country code and area code, and said terminating number having an at least three digit switch code following the three digit area code that does not match the enterprise at least three digit switch code;

(13) incoming international long distance leaking call from the data network wherein a desired route is over the PSTN if said terminating number has more than ten digits beginning with an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least an inbound international number from said inbound international list, followed by a country code that matches the enterprise country code, followed by a three digit area code that does not match the enterprise area code;

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iii) truncating said termination number to:

(1) said extension number if said call is categorized as a said inbound national

long distance call or a said inbound international call;

(2) an at least three digit switch code and said at least an extension code if

said call is categorized as a said inbound national leaking call or a said

international inbound local leaking call;

(3) said at least three digit area code, said at least three digit switch code, and

said extension number if said call is categorized as a said inbound

international long distance leaking call;

iv) testing said desired route if said desired route is over the data network to

detect if said desired route is unavailable for transmitting said call, and

determining a desired re-direct route over the PSTN if said desired route is

unavailable.

24) An article for executing a dial plan for a packet based voice system, the packet based

voice system comprising at least a gateway connected to a PBX at an enterprise, the

gateway connected to a data network, the gateway connected to a PSTN; the

enterprise having a three digit area code, an at least three digit switch code; the article

comprising:

a) a computer readable storage medium;

b) a national enterprise list recorded on said medium, said national enterprise list

having at least an enterprise number; each of said at least an enterprise number

having a three digit area code and an at least three digit switch code;

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c) a national leak list recorded on said medium, said national leak list having a list of at least one national leak number comprising at least a three digit area code;

d) an international outbound enterprise list recorded on said medium, said international outbound enterprise list comprising a list having at least an international outbound enterprise number, said international outbound number having an at least two digit country code, followed by a foreign area code, followed by a foreign switch code;

e) an international inbound list recorded on said medium, said international inbound list having at least an inbound international number, said inbound international number comprising an at least two digit international direct dial access code;

f) a special list recorded on said medium; said special list comprising at least a number; and

g) means recorded on said medium for executing the steps of:

   i) receiving a call; querying said call for a termination number; said termination number comprising at least an extension number;

   ii) using said termination number to categorize said call as an:

   (1) inbound national long distance call from the data network wherein a desired route is over the PBX if said termination number begins with a one and is followed by three digits that match the enterprise three digit area code followed by at least three digits that match the enterprise at least three digit switch code;

   (2) outbound national long distance enterprise call from the PBX wherein a desired route is over the data network if said termination number begins

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with a one and is followed by a three digit area code and an at least three digit switch code that match a three digit area code and an at least three digit switch code from one of said at least an enterprise number from said national enterprise list;

(3) special call from the PBX wherein a desired route is over the PSTN if said termination number is less than seven digits and matches one of said at least a special number from said special list;

(4) inbound call from the PSTN wherein a desired route is over the PBX if said termination number has fewer than seven digits and is not categorized as a said special call;

(5) outbound national leaking call from the PBX wherein a desired route is over the data network if said termination number begins with a one and is followed by three digits that match said at least three digit area code from one of said at least a national leak numbers from said national leak list;

(6) inbound national leaking call from the data network wherein a desired route is over the PSTN if said termination number begins with a one followed by three digits that match the enterprise area code followed by at least three digits that do not match the enterprise at least three digit switch number;

(7) outbound national long distance call from the PBX wherein a desired route is over the PSTN if said termination number begins with a one and is not categorized as a said inbound national leaking call, a said outbound

national leaking call, a said inbound national long distance call, or a said outbound national long distance enterprise call.

(8) outbound international enterprise call from the PBX wherein a desired route is over the data network if the first three digits of said termination number are 011 and are followed by an at least two digit country code, a foreign area code, and a foreign switch code that match said at least two digit country code, said foreign area code, and said foreign switch code from one of said enterprise numbers from said international outbound enterprise list;

(9) outbound international leak call from the PBX wherein a desired route is over the data network if said termination number has three first digits of 011 followed by a country code and a foreign area code that match said country code and said foreign area code from one of said at least a foreign leak numbers on said foreign leak list;

(10) outbound international call from the PBX wherein a desired route is over the PSTN if said termination number has three first digits of 011 and said call is not classified as a said outgoing international enterprise call or a said outgoing international leak call;

(11) inbound international call from the data network wherein a desired route is over the PBX if said terminating number has more than 10 digits and has an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least an inbound international number from said international inbound list followed by a country code, a

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three digit area code, and an at least three digit switch code that match the country code, three digit area code, and at least three digit switch code of the enterprise;

(12) inbound international local leaking call from the data network wherein a desired route is over the PSTN if said terminating number has more than ten digits beginning with an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least one inbound international number from said international inbound list, followed by a country code and an area code that match the enterprise country code and area code, and said terminating number having an at least three digit switch code following the three digit area code that does not match the enterprise at least three digit switch code;

(13) incoming international long distance leaking call from the data network wherein a desired route is over the PSTN if said terminating number has more than ten digits beginning with an at least two digit prefix that matches said at least two digit international direct dial access code from one of said at least an inbound international number from said inbound international list, followed by a country code that matches the enterprise country code, followed by a three digit area code that does not match the enterprise area code;

iii) truncating said termination number to:

(1) said extension number if said call is categorized as a said inbound national long distance call or a said inbound international call;

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(2) an at least three digit switch code and said at least an extension code if

said call is categorized as a said inbound national leaking call or a said

international inbound local leaking call;

(3) said at least three digit area code, said at least three digit switch code, and

said extension number if said call is categorized as a said inbound

international long distance leaking call;

iv) testing said desired route if said desired route is over the data network to

detect if said desired route is unavailable for transmitting said call, and

determining a desired re-direct route over the PSTN if said desired route is

10   unavailable.